ORIGINAL

APS

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January 30, 2009

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

RE: RESIDENTIAL TIME-OF-USE RATES ET-2 AND ECT-2 ANNUAL REPORT
DECISION NO. 68645
DOCKET NO. E-01345A-05-0674

Pursuant to Decision 68645:

> "APS will file with Docket Control annual reports that detail the load shape of the participants in the experimental rates ET-2 and ECT-2."

Attached is Arizona Public Service Company's 2008 annual report on the residential TOU (time-of-use) rates ET-2 and ECT-2.

If you or your staff have any questions or concerns please call Chuck Miessner 602-250-3081.

Sincerely,

Leland R. Snook

Attachments

LS/dst

CC: Ernest Johnson
Terri Ford
Brian Bozzo

Arizona Public Service Company
Residential Time-of-use Rates ET-2, ECT-2
Compliance Report, Decision No. 68645, Docket No. E-01345A-05-0674
Initial Filing, Docket No E-01345A– 07-0448
January 30, 2009

Arizona Public Service Company
Residential Time-of-use Rates ET-2, ECT-2
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Background

In July 2006, APS implemented the "series-2" residential time-of-use rate schedules, ET-2 and ECT-2, which have an on-peak period of noon to 7:00 p.m. Rate Schedule ET-2 has on-peak and off- peak energy charges. Rate Schedule ECT-2 has an on-peak demand charge in addition to on-peak and off-peak energy charges. These rates are offered in addition to the Company's "series-1" residential time-of-use rate schedules, ET-1 and ECT-1R, which have an on-peak time period of 9:00 a.m. to 9:00 p.m.

Status

As of December 2008, 66,637 customers are participating in the ET-2 rate. The year over year increase in customers on ET-2 was 25,960, a growth rate of 63.8%. 26,885 customers are participating in ECT-2 rate. Similarly, the increase in year-over-year customer participation in ECT-2 was 15,006, which is a growth rate of 126.3%. Overall, as of December 2008, the series-2 time-of-use rates had a total participation level of 93,522. This represents a year-over-year increase in customer count of 40,966, which is a 78.0% increase in the total customer participation level.

Load Shapes

Average daily load shapes for the winter and summer seasons were derived from recorded load research data. The summer seasonal load shapes consist of hourly load data from May 2008 through October 2008. The winter load shape includes data from December 2007 through April 2008 and November 2008. The attached load shapes are provided for weekday and weekend types. For comparison, the load shapes for rate schedules ET-1 and ECT-1R are also provided. See Graphs 1 through 8 found in Appendix A.

Peak Usage and Shifting

The ET-2 and ECT-2 summer weekday load shapes show a slight increase in usage after 7:00p.m., when the on-peak period expires. Conversely, the ET-2 and ECT-2 summer weekend load shapes show a modest decrease in usage after 7:00 p.m. The ET-1 and ECT-1 show a similar shape around the same hours during the summer weekends. This impact is more pronounced for the ECT-2 rate, which has an on-peak demand charge, in addition to on-peak and off-peak energy charges (as shown in Table 1).

The percent kWh consumed during the noon to 7:00 p.m. on peak period for the summer season was approximately 25% for ET-2 and 23% for ECT-2, based on load research data. By comparison, the summer on-peak usage for the same time period (noon to 7:00 p.m.) for rate schedule ET-1 and ECT-1R, which have a 12 hour on-peak period, is approximately 25% and 25% respectively. This suggests that although the on-peak

periods differ between the series-1 and series-2 time-of-use rates, the participants on the series-2 time-of-use rates are displaying roughly the same on-peak consumption pattern and similar shifting of energy to the off-peak period when compared with the series-1 time-of-use rates.

Table 1.

Peak Consumption
(12pm to 7pm)
Time-Of-Use Rates

Rate Schedule	On-Peak Usage – Summer	On-Peak Usage – Winter
ET-2	25%	19%
ECT-2	23%	16%
ET-1	25%	17%
ECT-1R	25%	17%

1. ET-1 and ECT-1R usage based on same on-peak hours as ET-2 and ECT-2.

Variation in Customer Usage

APS also assessed the variation in individual customer usage for each hour, as compared to the class average usage. We computed a specific measure of usage variation known as the coefficient of dispersion, or COD[1]. The findings are displayed in Table 2 and Graphs 9 through 12 in Appendix B. It shows that the customers' load variation becomes lower as the on-peak period progresses from 12:00 noon to 9pm for both ET-1 and ET-2 customers.

Table 2.

Summer Variation (COD)
Time-Of-Use Rates
(ET-2 and ET-1)

Rate	12 noon COD Summer	7pm COD Summer	9pm COD Summer
ET-2	24 %	21 %	19 %
ET-1	30 %	24 %	22 %

1. The COD values displayed are an absolute value.

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1. $$CoD = \frac{1}{n}\sum_{i=1}^{n}\left|\frac{x_i - M_e}{M_e}\right|$$ Where, M_e = Median Value

Customer Bill Savings

As depicted in the table below, customer savings were significant across both series of TOU rates when compared to the same usage pattern under the traditional E-12 rate. This is largely due to the customers' ability to shift load to off-peak periods in order to alleviate higher on-peak charges. Total customer bill savings compared with a non-time of use rate, E-12, was $18,080,000 for ET-2, and $15,780,000 for ECT-2. The combined savings for both rates was $33,860,000 or 23% compared to non-TOU rate schedule E-12. The savings are calculated off the base bill without any adjustment, taxes or other fees. See Table 3.

Table 3.

Customer Bill Savings
Time-of-use Rates
(ET-2 and ECT-2)

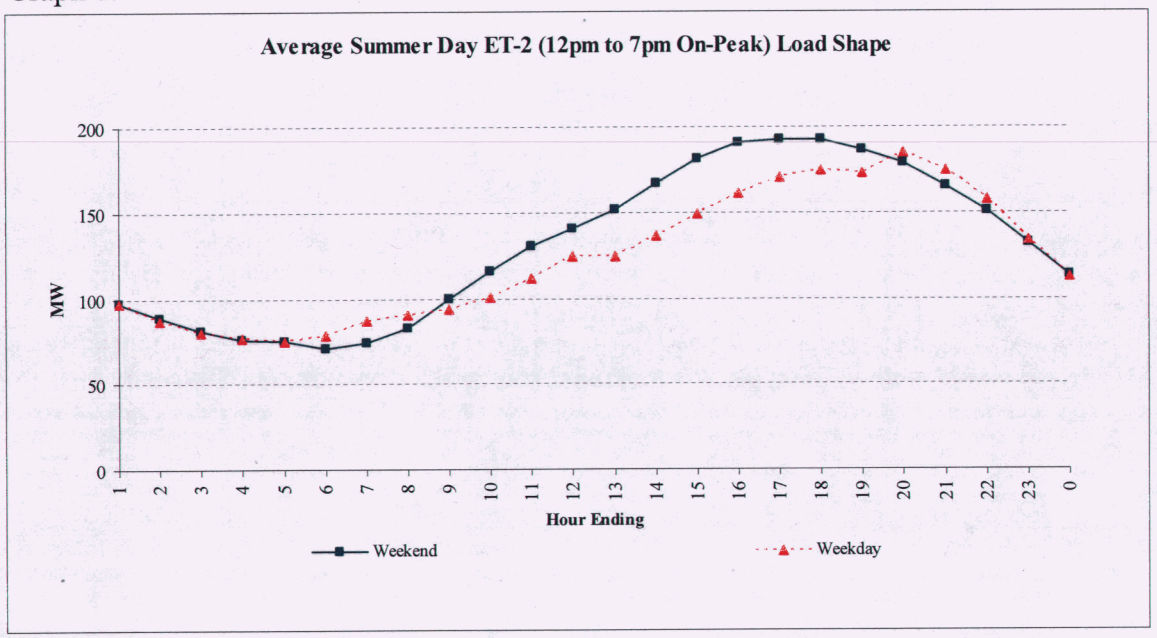
Rate	Average 12 ME Customers	Bill Savings compared with non-TOU rate, E-12	Average % Bill Savings per customer, compared with E-12
ET-2	53,835	$ 18,080,000	20%
ECT-2	20,152	$ 15,780,000	29%
Total	73,987	$ 33,860,000	23%

1. ET-2 and ECT-2 savings derived from bill calculations based on actual usage data.
2. Results for January 2008 through December 2008.

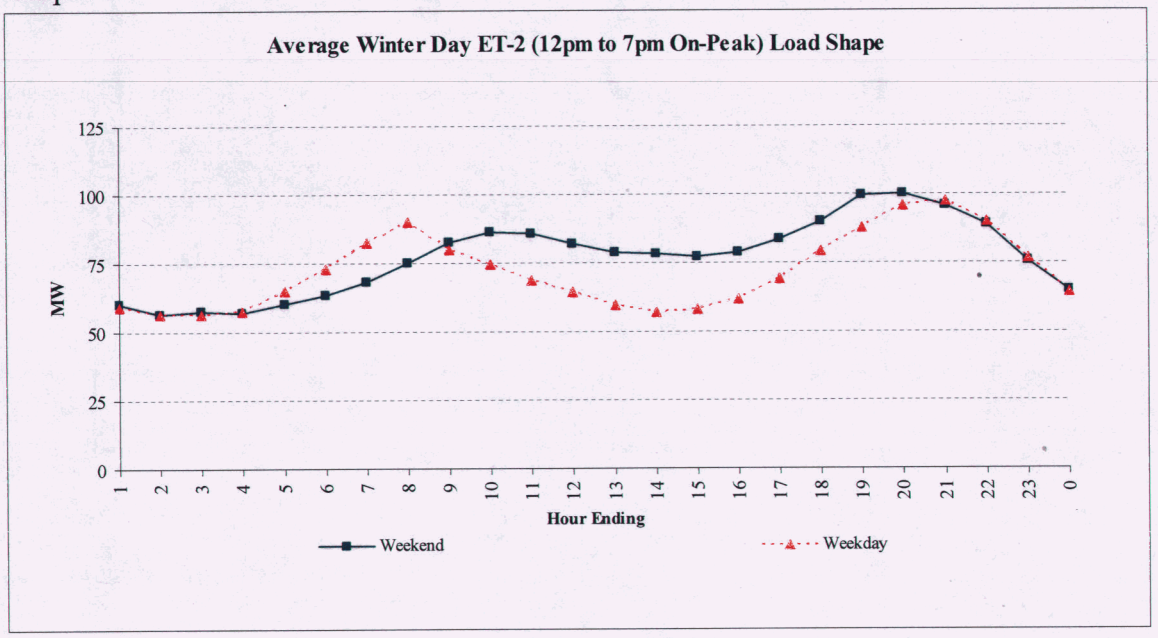
Appendix A: LOAD SHAPES

The following load shapes display the average summer and winter usage for all customers who take service under the listed TOU rate. Note the general similarities in shape when comparing ET-2 and ET-1 customers.

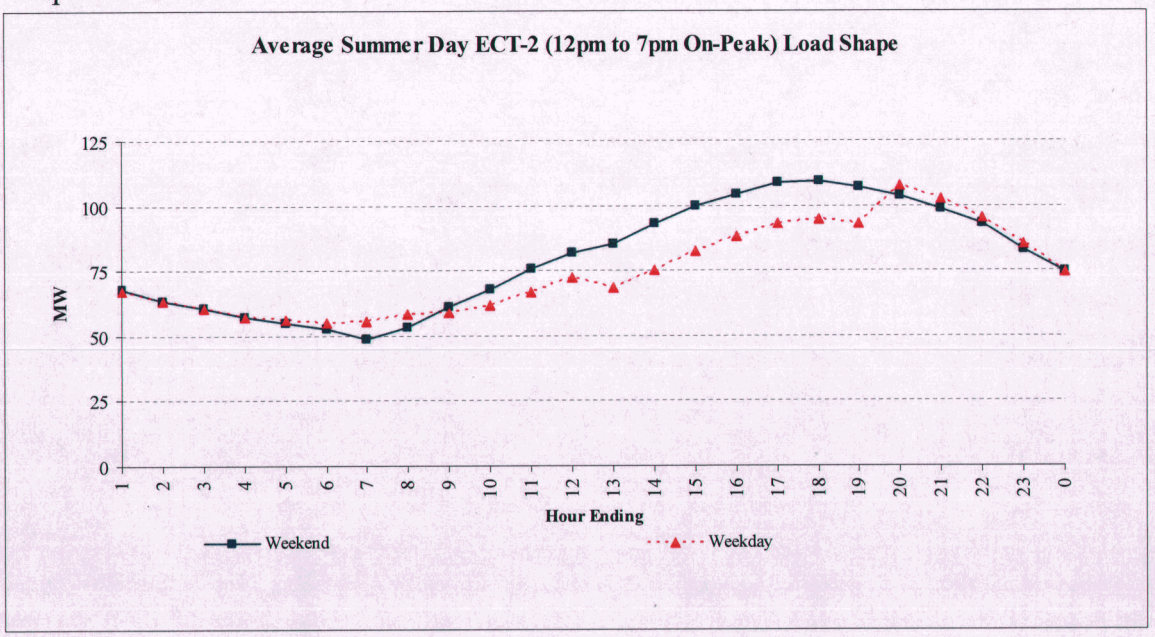
Graph 1.



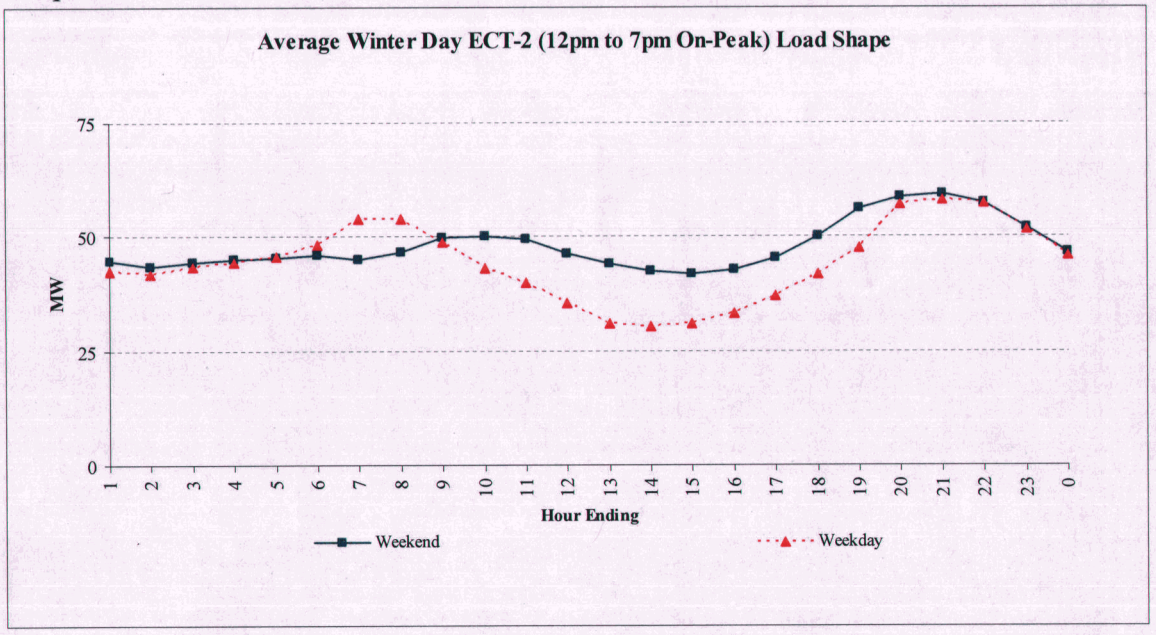
Graph 2.



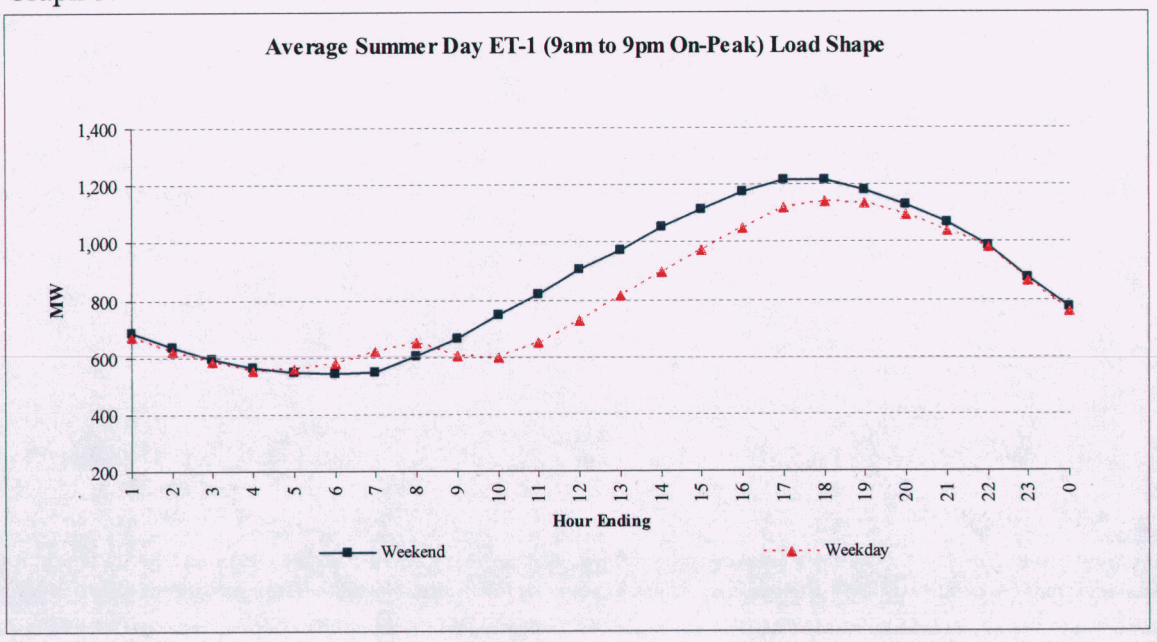
Graph 3.



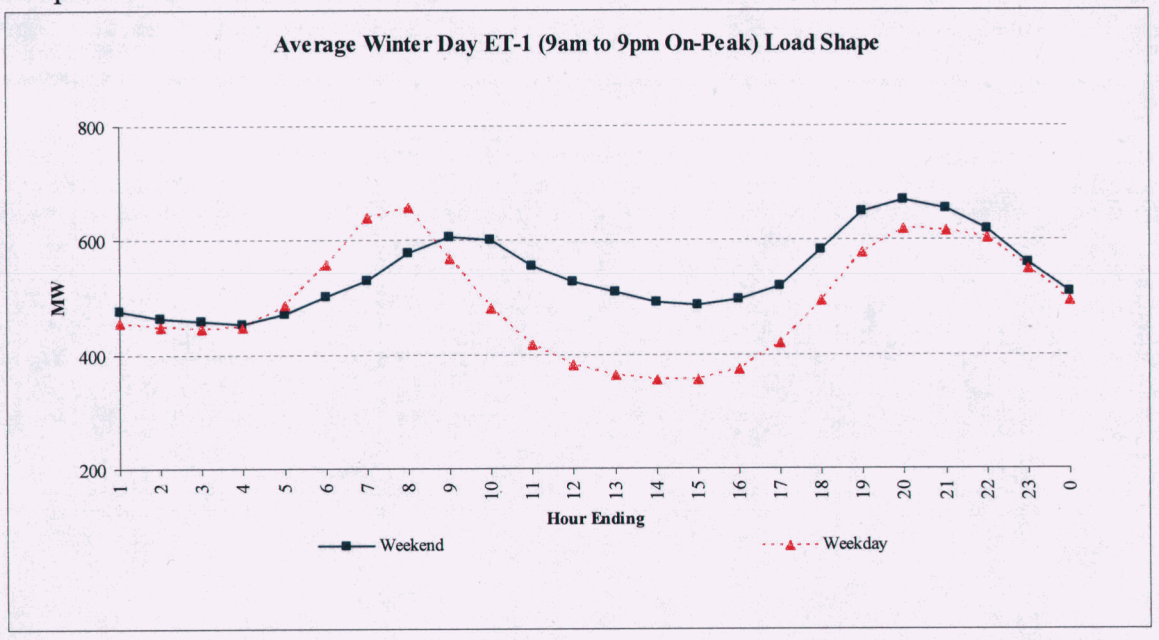
Graph 4.



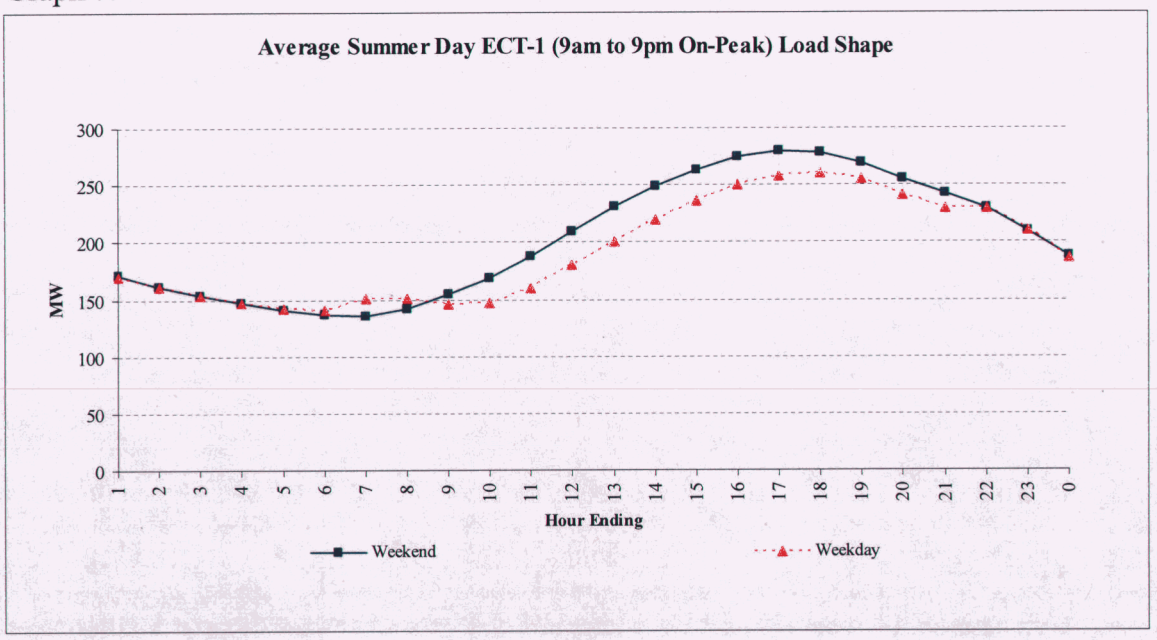
Graph 5.



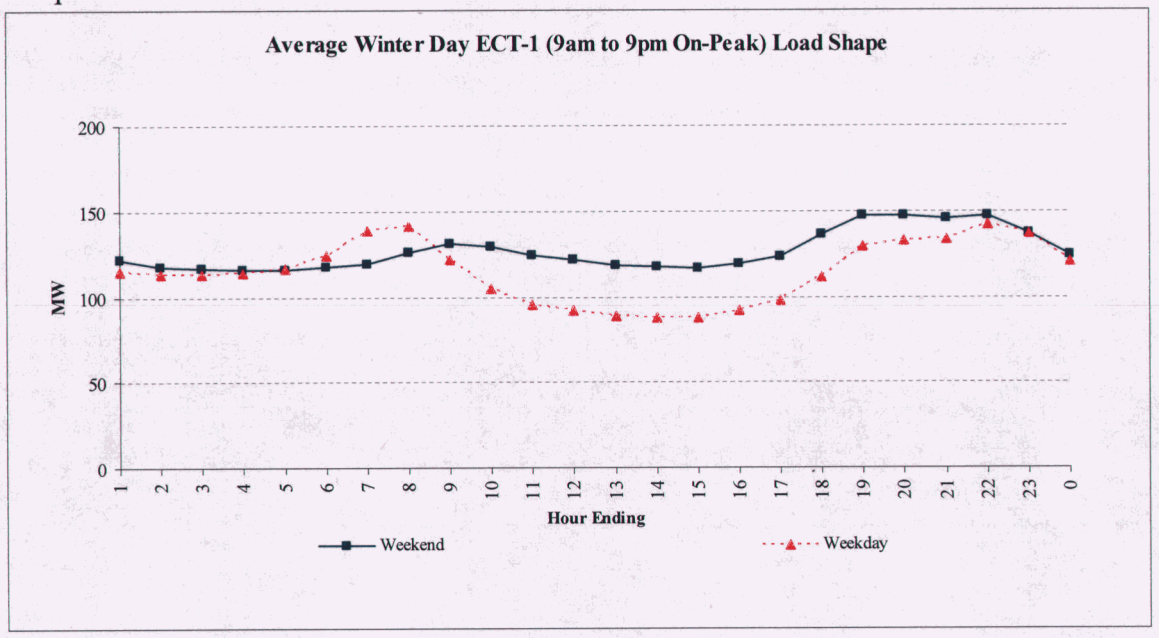
Graph 6.



Graph 7.

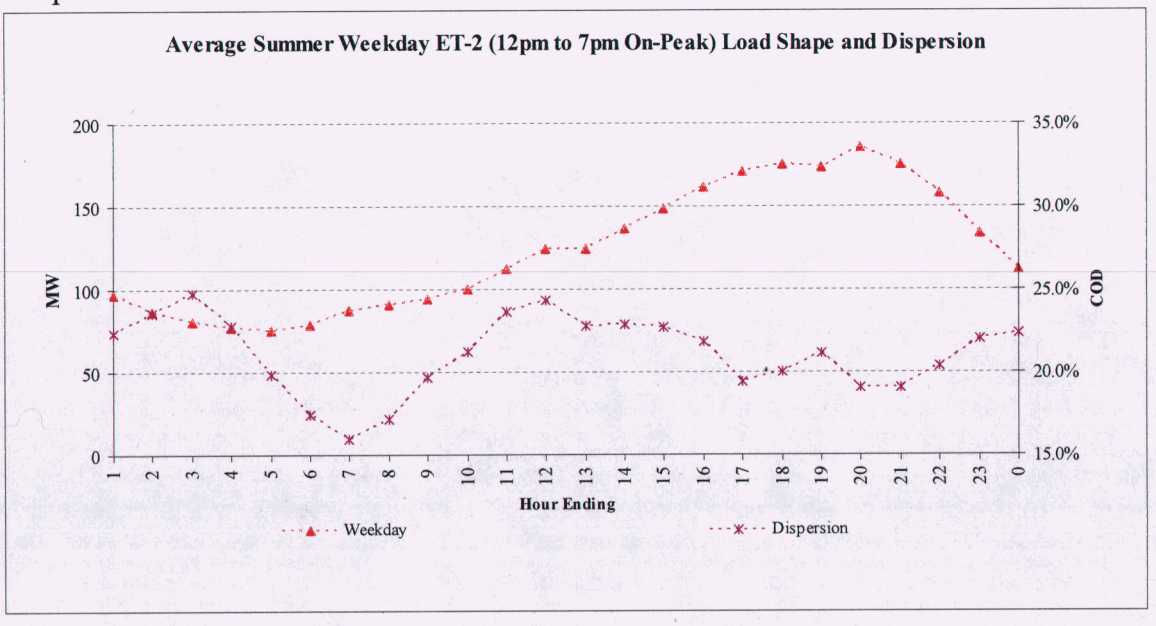


Graph 8.

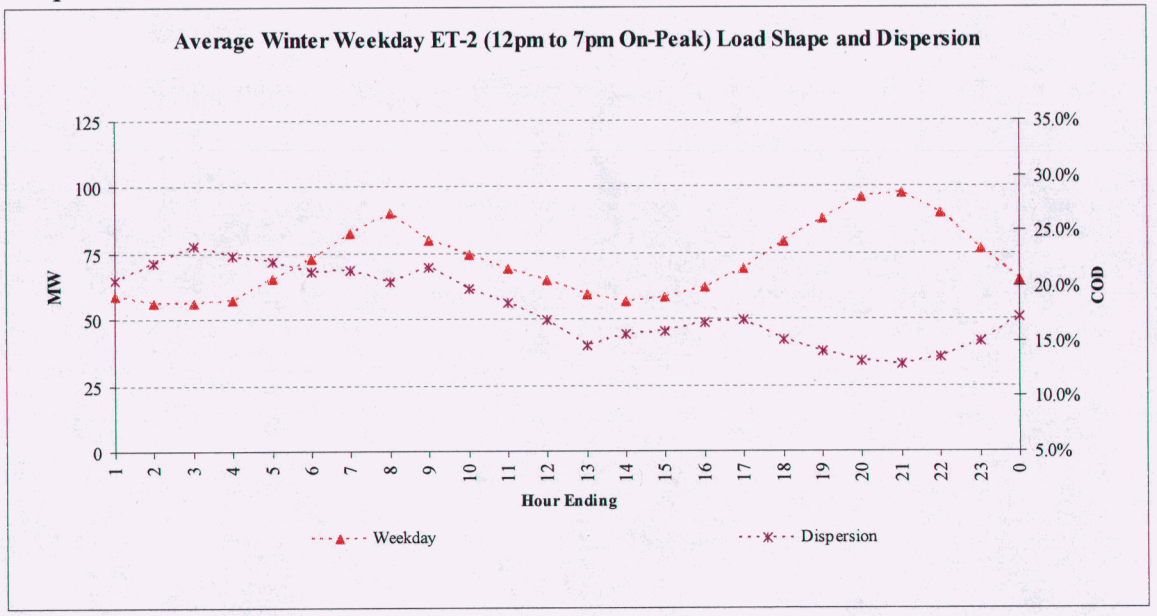


APPENDIX B: CUSTOMER VARIATION IN LOAD

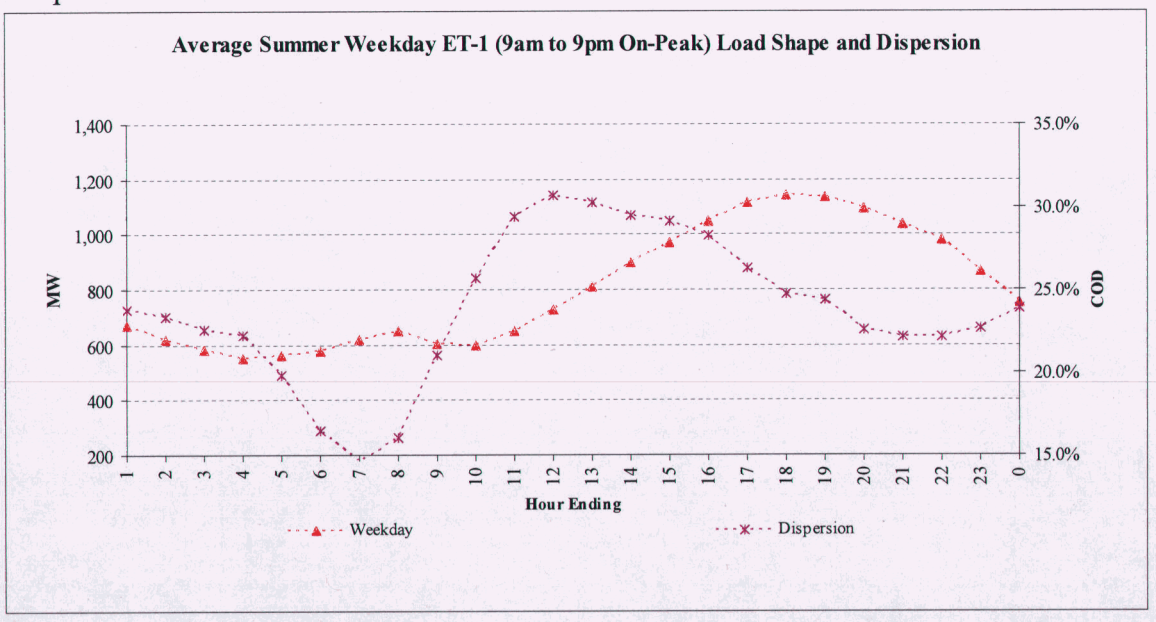
Graph 9.



Graph 10.



Graph 11.



Graph 12.